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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,701	04/16/2004	Jan Dirk Boness	81738/LPK	1772

7590 02/02/2005

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EXAMINER

LEE, PETER

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 02/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

11A

Office Action Summary	Application No.	Applicant(s)	
	10/826,701	BONESS ET AL.	
	Examiner	Art Unit	
	Peter Lee	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,7 and 8 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 6, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings/Specification

1. The drawings/specification are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

In Figure 1, reference is given to a part 2; however this part is not explained anywhere in the specification. It is requested that this matter be addressed either by amending the drawings to take out the reference to part 1, or amending the specification to include the reference part 2. No new matter can be used.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The abstract of the disclosure is objected to because the last sentence of the abstract is grammatically incorrect. It is suggested to amend as follows:

On page 14 line 6, insert --and-- before the word "seam".

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On page 14 line 6, replace “discarding” with --discards--.

Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 5 is objected to because of the following informalities:

The above claim gives reference to a particular compass and/or registration error when on page 12 lines 30-31 it states “the compass and/or register errors”. However, no mention of any specific errors is noted in the family of claims leading up to claim 5. Proper antecedent basis must be practiced.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Castelli et al (US pn 6336019).

Castelli teaches a method (ie. process) for improving the registration between color images (ie. avoiding compass and/or register errors) in a printing machine, comprising the steps of: imprinting toner markings (col. 8 lines 26-32) (ie. marks (12)) on a photoreceptor belt (fig. 2

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part 350; the prior art reference also teaches the use of non-photoconductive transfer belts and intermediate transfer belts in col. 4 lines 46-67) (ie. closed loop image carrying element); detecting the toner markings on the photoreceptor belt with a position determining sensor (fig. 2 part 352; col. 5 lines 19-29) (ie. first sensor (8)), detecting a seam (fig. 2 part 351) on the photoreceptor belt with a seam sensor (fig. 2 part 356; col. 6 lines 3-17) (ie. second sensor (7)); and upon the seam sensor (ie. second sensor) signal indicating the arrival of a seam at the predetermined position (ie. in the area of the seam), the signals from the position determining sensor (ie. first sensor) are input to the controller (fig. 3 part 244; col. 7 lines 32-45) (ie. device for receiving mark values) where the position determining sensor can determine it is unreliable data and ignore it (col. 10 lines 50-60) (ie. discarding detected sensor values read by the first sensor (8) in the area of the seam (11), that is detected by the second sensor (7)).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castelli in view of Evans et al. (US pn 5101232).

Castelli teaches all of the limitations as laid out above, as well as sending a signal to an

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input controller (fig. 3 part 244) (ie. control mechanism) once a seam is detected by the seam sensor. Castelli does not teach the use of a third sensor that measures an angle of rotation to be used along with the other two sensors in determining a seam location on an image carrying belt.

Evans teaches a belt hole sensor (fig. 2 part 122) (ie. angle of rotation sensor) to sense a hole on a belt (ie. mark) every belt rotation, and using a microcontroller (ie. control mechanism to read the count value of the angle of rotation sensor) to count the machine clock time in between the belt revolutions to determine the relationship between seam locations (fig. 2 part 118; col. 9 lines 50-65) (ie. based on count value identifying location of seam). The information obtained from the belt hole sensor and the machine counts are then used to determine a phase error (ie. sensor values are stored in a control mechanism to compare to register errors) (ie. col. 9 lines 60-65), and then it is determined whether the error is great enough to be corrected or left alone. In the event the phase error is outside of acceptable bounds, a new differential phase is calculated for creating a new velocity for the belt to limit further phase errors (col. 10 lines 30-38) (ie. sensor values read by first sensor are discarded).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the input controller of the registration correction system taught by Castelli to include a separate sensor for monitoring the rotational velocity of a belt by iterating a count between the sensor's detection of a mark. One of ordinary skill in the art would have been motivated to include such a sensor because monitoring a velocity of the belt will further aid in maintaining an accurate position of a seam located on the belt (col. 7 lines 5-24) which is important to prevent an image formation at such a position.

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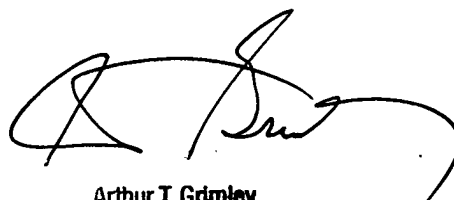
5. Claims 3, 4, 6, 9, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Lee whose telephone number is 571-272-2846. The examiner can normally be reached on mon-fri 9:00 am-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PL 1/27/2005

A handwritten signature in black ink, appearing to read 'Arthur T. Grimley', with a stylized flourish extending from the end.

Arthur T. Grimley
Supervisory Patent Examiner
Technology Center 2800